REMARKS

Claim 18 is amended. Claims 1-13 and 15-23 remain in the Application. Reconsideration of the pending claims is respectfully requested in view of the above amendments and the following remarks.

I. Claims Rejected Under 35 U.S.C. § 102

A. Claims 18 and 20-22 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,493,577 issued to Choquette et al. ("Choquette").

To anticipate a claim, the Examiner must show that a single reference teaches each of the elements of that claim. Amended claim 18 recites the elements of:

> "....wherein the confinement-conducting regions and the gain region have a mesa structure, and a lateral portion of at least one of the material layers constituting the semiconductor layers of the confinement-conducting regions and the gain region is recessed, and the recess is formed by selectively etching the lateral portion of at least one of the material layers and the material layers surrounding the recess are not selectively etched, and the recess is partially or wholly filled by deposition with an oxide layer, a nitride layer or a combination of them" (emphasis added).

Applicants submit that Choquette does not teach these elements for at least the following reasons.

Firstly, amended Claim 18 including an oxide layer (or a nitride layer, or a combination of both) is substantially different from Choquette including a control layer **in view of the structure**.

The semiconductor emitting device disclosed by Choquette is formed using the difference of oxidation rate (or degree) of semiconductor layers. Specifically, the control layer in Choquette comprises a semiconductor alloy containing aluminum, e.g., Al(Ga)As that may be oxidized in part after a mesa is formed.

By contrast, amended Claim 18 recites "the recess is formed by selectively etching the lateral portion of at least one of the material layers and the material layers surrounding the recess are not selectively etched." The semiconductor optical device of amended Claim 18 is formed using the difference of etching rate (or degree) of semiconductor layers. Specifically, the oxide layer (or the nitride layer, or a combination of both) in amended Claim 18 is formed by a selective etching and filling process. Accordingly, the material layers surrounding the recess or

filled material (e.g., oxide) in amended Claim 18 are **substantially different** from those surrounding the control layer in Choquette.

Secondly, the oxide layer (the nitride layer, or a combination of both) in amended Claim 18 is **substantially different** from the control layer in Choquette **in view of the structure, quality, and adhesion characteristics**.

Amended Claim 18 recites "the recess is partially or wholly filled by deposition with an oxide layer, a nitride layer or a combination of them." Thus, the oxide layer (or the nitride layer, or a combination of both) in amended Claim 18 is formed by a deposition process. The control layer in Choquette is formed by an oxidation process. Thus, the oxide layer (or the nitride layer, or a combination of both) in amended Claim 18 is **substantially different** from the control layer of oxide in Choquette **in view of quality and adhesion characteristics to other material layers**.

Thirdly, the oxidation process in Choquette **is not commercially applicable** to the semiconductor optical device recited in amended Claim 18.

In Choquette, the oxidation process is used to obtain a current confinement structure. The oxidation process is generally known in the field for emitting devices based on a GaAs semiconductor substrate. However, this oxidation process is not commercially applicable to emitting devices based on certain types of substrates, e.g., an InP semiconductor substrate, as explained in the Description of the Related Art at page 2, lines 1-13 of the specification. Thus, the selective etching and deposition processes recited in amended Claim 18 are superior to the oxidation process disclosed by Choquette.

Accordingly, reconsideration and withdrawal of the anticipation rejection of Claim 18 are requested.

In regard to Claims 20-22, these claims depend from Claim 18 and incorporate the limitations thereof. Thus, at least for the reasons mentioned above in regard to Claim 18, Choquette does not anticipate these claims. Accordingly, reconsideration and withdrawal of the § 102 rejection of Claims 18 and 20-22 are respectfully requested.

B. Claim 19 is rejected under 35 U.S.C. § 102(b) as being anticipated by or, in the alternative under 35 U.S.C. § 103(a) as being obvious over Choquette. Claim 19 depends from Claim 18 and incorporates the limitation thereof. Thus, at least for the reasons mentioned above

in regard to Claim 18, Choquette does not teach or suggest each of the elements of Claim 19. Accordingly, reconsideration and withdrawal of the rejection of Claim 19 are requested.

II. Allowable Subject Matter

Applicants appreciate the Examiner's indication that Claims 1-13 and 15-17 are allowed.

Claim 23 is objected to as being dependent on Claim 18. Applicants respectfully submit that the amendment to Claim 18 has obviated the need to rewrite Claim 23. Thus, Claim 23 is allowable for at least the reasons mentioned above in regard to Claim 18. Accordingly, reconsideration and withdrawal of the objection to Claim 23 are requested.

CONCLUSION

In view of the foregoing, it is believed that all claims are now in condition for allowance and such action is earnestly solicited at the earliest possible date. If there are any additional fees due in connection with the filing of this response, please charge those fees to our Deposit Account No. 02-2666.

Respectfully submitted,

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CERTIFICATE OF MAILING:

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Amber D. Saunders 11/8/06

Amber D. Saunders Date